

Era Aviation Services

PROCUREMENT SPECIFICATION

PROCUREMENT SPECIFICATION NO. PS4026

**HOSE ASSEMBLY - HIGH PRESSURE (3000 psi)
HYDRAULIC, SMOOTH TUBE TFE (TEFLON)**

Prepared By: Craig M Smith Date: 07/29/04
Craig M Smith

Approved By: Dave Murphy Date: 8/9/04
Quality Control: Dave Murphy
Dave Murphy

Engineering: Douglas Marwill Date: 08/09/04
Douglas Marwill

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1 INTRODUCTION

1.1 Purpose

This process specification provides information for creating an Era Aviation part number for a flexible hose assembly which can be called out on the next assembly "using" drawing.

1.2 Hose Assembly Application

The hose assembly defined by this specification is a smooth-tube flexible tetraflouoroethylene (TFE) Teflon type hose reinforced with stainless steel wire braid and reusable end fittings. The hose assemblies are suitable for use in aircraft high pressure hydraulic systems (3000 psi operating pressure). See Section 3, note 2 for applicable limitations.

2 HOSE ASSEMBLY PART NUMBERS

A hose assembly part number can be created or deciphered by examination of the "part no. code" and "example of hose assembly part no." sections shown in Sections 2.1 and 2.2, respectively. Use "Table I" and "Table II" in Sections 2.3 and 2.4, respectively, to code the hose size and end fitting style in the part number. The end fitting style refers to whether the fitting is straight, 45° angle, 90° angle 37° flared nut, or flanged and the fitting material (stainless steel).

The notes in Section 3 provide specific information used in the specification of the hose assemblies.

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PS4026 - H 000 A C 28 4 A

Basic Number

Hose Size Code
(Table I)(Note 9) Degree
Rotation (If none,
use 000)Left End Fitting
Code (Table II)Add "code letter" for
hose with cover/sleeve.Leave blank if sleeve is
not required.
(Note 10)(Note 4) Fractional
Length coded in 1/8
inch increments

Length in inches

Right End Fitting
Code (Table II)

2.2 Example Of Hose Assembly Part No:

PS4026-H000AC284A = Hose Assembly, .50 Inch Diameter Nominal Hose Size, 0° Rotation, Straight Steel Flared Fitting on the Left End of the Hose, 90° Steel Flared Fitting on the Right End of the Hose, 28 1/2 Inches Long with AE102 Silicone coated fiberglass fire sleeve.

2.3 Hose Size Code

Use Table I to specify the code letter for the desired nominal hose size (inside diameter). Dash numbers shown are equivalent tubing outside diameter in 1/16" increments. The normal maximum operating pressure is also shown.

Hose Size	-4	-6	-8	-10	-12
Code Letter	E	G	H	J	K
Operating Pressure (psi)	3000	3000	3000	3000	3000
Proof Pressure (psi)	6000	6000	6000	6000	6000
Burst Pressure (psi)-High Temp	12,000	10,500	10,500	9000	9000
Burst Pressure (psi)-Room Temp	16,000	14,000	14,000	12,000	12,000

TABLE I

2.4 End Fitting Style Code

Use Table II to specify the fitting style and fitting material of each metal end fitting.

Fitting Code	Fitting Spec No. or Part No.	Fitting Style (note 3)	Fitting Material
A	MS27053 <u> </u> or AE18806 <u> </u>	I (37° Flared; Straight)	CRES Steel
B	MS27059 <u> </u> or MS27055 <u> </u> or AE18878 <u> </u>	II (37° Flared; 45° Elbow)	CRES Steel
C	MS27060 <u> </u> or MS27057 <u> </u> or AE18880 <u> </u>	III (37° Flared; 90° Elbow)	CRES Steel
D	MS27381 <u> </u> C or AE18926 <u> </u>	I (flareless & straight thd; Straight)	CRES Steel
E	MS27384 <u> </u> C or MS27382 <u> </u> C or AE18882 <u> </u>	II (flareless & straight thd; 45° Elbow)	CRES Steel
F	MS27385 <u> </u> C or MS27383 <u> </u> C or AE18884 <u> </u>	III (flareless & straight thd; 90° Elbow)	CRES Steel

Table II

3 NOTES

1. A Lightweight hose assembly defined by this specification that meets the performance requirements of AS1339 (high pressure smooth Teflon hose). Abrasion shield, if required, shall be as defined in Note 10.
2. These hose assemblies are intended for use with aircraft hydraulic fluid or ambient temperature operating range of -67°F to +400°F. See Section 2.3, Table I for normal maximum operating pressures. See vendor data for minimum bend radius and other limitations.
3. End fittings shall be either Flared or Flareless and style shall be either Type I, II, or III.
 - a) Flared: 37° flared end fittings shall mate with an MS33656 fitting design. Threads shall conform to MIL-S-8879.
 - b) Flareless: Fittings shall meet NAS1760 flareless fitting design and shall mate with MS33514 end connection.
 - c) Fitting Style:
 - I Straight
 - II 45 degree elbow
 - III 90 degree elbow
4. Fractional length hoses shall be specified in the following increments only:
 - a) Under 30 inches long = 1/8 inch increments only
 - b) 30 inches long and over = 1/4 inch increments only
5. Hose assemblies shall be fabricated in accordance with Era Process Specification PS4021, Type IV.
6. This hose assembly shall be capable of conducting a direct current equal to or greater than 6 micro-amps at 1,000 volts.
7. Identify each hose assembly per PS4021, Section 6.
8. Do not mix different hose vendor component parts in the same hose assembly.
9. Angular orientation between the elbows is expressed in three digits. The angle is measured in degrees counterclockwise from centerline of the nearest fitting when positioned at 6 o'clock to the centerline of the other fitting as shown in the figure. If the desired orientation is zero degrees, specify "000".

10. A letter at the end of the part number designates the type of Aeroquip Corp. protective outer cover on the hose as follows:
 - " " = No code is an AE246 hose with stainless steel wire braid on the outside without any cover.
 - "A" = AE246 hose with AE102 Silicone coated fiberglass fire sleeve.
 - "B" = AE246 hose with AE251 heat shrinkable Polyolefin Abrasion Sleeve.
 - "C" = AE246 hose with AE506 Teflon Abrasion Sleeve.
 - "D" = AE246 hose with AE208 Nylon spiral wrap abrasion sleeve.
 - "E" = AE246 hose with AE138 Neoprene abrasion sleeve.
 - "F" = AE446 hose (AE246 hose with an integral silicone rubber firesleeve) which is fire resistant and can meet TSO C53a, Type D and TSO-C75 Type IIIA and IIIB requirements.
 - "G" = AE546 hose (AE246 hose with integral Polyester chafeguard).
11. This is the vendor's part number of a specific hose used in the hose assembly. A letter shall be placed at the end of the part number to designate the size. Refer to Table I in Section 2.3 to determine the correct code letter for each size.

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4 APPROVED PROCUREMENT SOURCES

Hose assemblies and component parts may be purchased only from the following Era Aviation engineering approved sources or their agents. Do not substitute any other vendor parts nor mix two different vendor parts in the same hose assembly.

COMPONENT PART	APPROVED VENDORS & CORRESPONDING HOSE PART NUMBERS		
	Aeroquip Corp. Jackson, MI (note 11)		
Hose W/O Sleeve	AE246		
Hose with a integral silicone rubber firesleeve	AE446		
Hose with integral Polyester chafeguard	AE546		
End Fittings	See Table II for Fitting Part No.		